

Strachan, D.P., Jarvis, M.J., Feyerabend, C. "Passive smoking, salivary cotinine concentrations, and middle ear effusion in 7 year old children" Br Med J 298: 1549-1552, 1989.

This cross-sectional observational study was designed to assess the contribution of passive smoking to the development of middle ear underpressure and effusion. The subjects were 892 children aged 6.5-7.5 years taken from one-third of the primary schools in Edinburgh. Satisfactory tympanograms were obtained for 872 subjects, and results of assay of salivary cotinine concentrations were available for 770 children. Both measures were available in 736 of the original 892 children. The aim of this study was to determine if there was a correlation between the prevalence of middle ear underpressure and effusion and the salivary cotinine levels in the children. The authors reportedly found that there was a trend towards more abnormal tympanometric findings with increasing cotinine levels. The conclusion of the authors was that "[t]he results of this study are consistent with those of case-control studies of children attending for an operation to relieve middle ear effusion" and that "about one-third of the cases of middle ear effusion in this study were statistically attributable to exposure to tobacco smoke." The investigators recommend that "the disease should be added to the list of recognized hazards associated with passive smoking."

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